Mechanical Design of the AAA β = 0.175 Spoke Resonator Dale Schrage, LANL

The β = 0.175, 2-gap, 350 MHz spoke resonator cavity for the LANL Advanced Accelerator Applications (AAA) Program is an integrated engineering and physics design of cavity to follow the 6.7 MeV RFQ on the LEDA Beamline. Modern RF cavity and structural analysis codes have allowed this cavity to be built without prototyping. The cavity design process is described.